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TWO CASES OF RUPTURED PERINÆUM SUCCESSFULLY TREATED BY A NEW METHOD.

[Read before the Boston Society for Medical Improvement, June 25th, 1866, and communicated for the Boston Medical and Surgical Journal.]

By Samuel Cabot, M.D.

Having partially failed in the treatment of a case of ruptured perinæum by Mr. Baker Brown's method, through the ulceration of the deep stitch at the margin of the anus, and feeling that that method was defective because it was necessary to carry the stitch at the margin of the anus so high up as to draw the deep parts so much forward as to produce a folding or puckering of the two surfaces, and thus to prevent a perfect apposition and rapid union, which is so very desirable, particularly in this operation—I was led to employ the method which I put in practice in the two cases about to be reported, and, so far as the new method is concerned, with perfect success in both cases.

Case I.—Nov. 1st, 1864. Eliza E. F., æt. 22. Rupture of perinæum of four months' duration. The patient has excellent health. At confinement, she was attended only by a midwife, who did not discover the injury till a week after. The labor lasted 8¼ hours, and was attended with great suffering. She recovered from it, however, in about the regular time. Some little time after stitches were put in by a physician, without any benefit. The rupture is quite extensive, extending through the sphincter ani. The surface is perfectly healed over. ℞. Olei ricini, ℥ i.

Nov. 3d.—This morning, an enema was given. The patient being placed in the position for lithotomy, which sufficiently separated the sides of the rupture and the labia, the integment was dissected from the sides and floor of the rupture, which extended upwards from the sphincter a little over three inches. Then, two long needles were passed through the sides of the rupture, just above the anus, opposite each other, the ends within the vagina being inserted into a cork, and the projecting ends tied so as to be brought within one fourth of an inch of each other; the fresh surfaces in their vicinity being thus brought into accurate apposition. Three double twisted sutures were passed deeply, about an inch apart, through the sides of the wound, and, being fastened to pieces of elastic bougie, drew its sides firmly together. Three superficial sutures were put in. The sphincter ani muscle was divided on each side of the coccyx. Not much bleeding. Compress and a T bandage. Beef-tea, gruel, &c. ℞. Smith & Melvin's liquid extract of opium, gtt. l. Later, ℞. Ext. opii liq., gtt. xxx. every four hours. Wound to be well syringed out, and urine to be drawn every four hours. Water bed.

Nov. 7th.—Considerable discharge of purulent matter. Wound gaping slightly above sphincter, at first deep stitch. Pulse 128. Dress frequently with ℞. Sol. potass. permanganat., ʒ i.; aquæ, Oi. Misce, on lint.

8th.—Pulse 108. The last superficial suture removed.

9th.—Only needles remaining. Nearly the whole length of the wound has united firmly.

10th.—Gaping for half an inch at first deep stitch.

14th.—Ruptured space diminishing. Its surface touched with nitrate of silver.

23d.—Sphincter ani now apparently firmly united.

24th.—Omit opiate.

25th.—Enema this morning attended with immense success. On examination, no injury from evacuation was discovered.

Dec. 5th.—Opening is diminished by at least one half. Has perfect control over bowels.

8th.—Nitrate of silver is applied every third day. A common-sized stick of it barely passes into the opening.

24th.—About one fourth of an inch still open.

The patient's husband writes as follows, on Feb. 27th, 1865:—

"My wife's general health is quite good. As for the wound, it is about two thirds as large as when she left; it has not closed up any for the last five weeks. The soreness is entirely gone, and she does not experience any serious inconvenience from the small aperture that remains."

Case II.—May 22d, 1866. Mrs. W., aged 37, had rupture of the perinæum seventeen years since, at the birth of her first child. Has borne two children since. She is a thin, sickly looking woman, has a tendency to chronic diarrhœa, and is much troubled with prolapsus uteri. The rupture extends through the sphincter ani, and she cannot control her motions.

The operation in this case was performed almost precisely as in the other, except that four needles were used instead of two, as in the first case. Two of these were common steel shawl pins, with black glass heads; the other two were common long darning needles. The shawl pins were drawn together till the heads met, with strong silk tied round them. The needles were shortened with cutting pliers, and the external ends were brought about as near together as the pins had been, that is, to about a quarter of an inch from each other, and secured in that position by a piece of cork, into which the projecting ends were thrust.

The treatment was about the same as in the preceding case. The whole wound healed by first intention, excepting a very small surface within the vagina, which soon healed by granulation. The deep stitches were withdrawn on the third day, and the superficial ones on the next. The needles were withdrawn in about a week; not then on account of any ulceration in their track, but because the pressure of the heads of the pins, and of the cork placed over the external ends of the needles, had produced ulceration on the buttocks by pressure where they came in contact.

The cork within the vagina produced no trouble in either of these cases; and if a bit of stiff paper or something of the sort had been interposed between the heads of the pins and the cork, and the soft parts, there would have been no external trouble.

EXCESSIVE PAIN OF A NEURALGIC CHARACTER FOLLOWING AMPUTATION OF THE FOREARM.

[Read before the Norfolk (Mass.) District Medical Society, May 9th, 1866, by JOSEPH STEDMAN, M.D., of Jamaica Plain.]

E. J., aged 29 years, a resident of West Roxbury, in stepping from the late train, at the Jamaica Plain station of the Boston and Providence Railroad, on the night of January 12th, 1866, slipped, and fell under the cars in such a manner that one wheel of the rear car passed diagonally across the palmar aspect of the right hand; the flange of the wheel inflicting a deep flesh wound, while the bones of the carpus and metacarpus were completely crushed and comminuted. On the ulnar side of the forearm, commencing at a point near the styloid process of the ulna and extending an inch and a quarter above, was a deep elliptical opening, through which I could easily pass my finger and examine the bones of the carpus; and its condition was readily ascertained, showing the extensive comminution of the bones and indicating that the hand was only attached to the forearm by the integuments. The whole hand was dislocated forward and upward, while the extremities of the radius and ulna were entirely uninjured.

Deciding that amputation was necessary, I requested the presence of Dr. F. Minot Weld, who concurring in my opinion, we desired a consultation before proceeding to this extremity, and Dr. B. E. Cotting, of Roxbury, was selected. The opinion of Dr. Cotting being in harmony with that before expressed, I requested him to proceed to the operation, but he very generously declined in favor of one of the younger men present. It was then agreed that Dr. Weld should amputate; and at 3, A.M., of the 13th, the circular operation was most skilfully and satisfactorily performed about four inches below the elbow.

But little hæmorrhage occurred; the arteries were secured, five ligatures being required, and a light water-dressing was applied. Up to the time of the administration of the ether but little pain was manifested; but soon after recovering from the effects of the anæsthetic, considerable pain was noticed in the stump, to relieve which morphine, in one fourth of a grain doses, was given.

Jan. 13th, P.M.—The patient was somewhat quieted by the morphine, and he seemed to rally from the shock sufficiently to realize all that was going on.

14th, A.M.—Some appearances of inflammation, and the water-dressing was continued. Slight delirium at times. Pulse 120 and weak. No appetite.

15th.—Less pain. Pulse 104. The flap seeming to be deficient in vitality, the water-dressing was omitted and a simple ointment applied. Diet of oysters and light food. Ale, in moderate quantities, to be allowed. P.M.—Flap looking decidedly unhealthy.

17th.—Has had a painful night, notwithstanding the morphine, and some disturbance of the abdominal region, with pain. Diet, essence of beef, tea and toast. Morphine q. s. to quiet pain.

18th.—More comfortable, except a difficulty in passing urine, and this he does with great effort, and only in the standing position.

19th.—Wound improving in appearance; line of demarcation well defined.

20th.—Slough commencing to separate. Considerable pain throughout the day. Morphine at intervals. Dressing of liquor sodæ chlorinatæ, diluted with water.

21st, 9, A.M.—Excessive pain. Slough separating, and appearing to involve nothing but the integuments. Removed portions of the decayed tissues.

22.—Slough entirely separated; muscular tissue not involved, and a fair granulating surface presented. Dressing of marshmallow ointment.

23d.—Feels much more comfortable. Slept nearly all night. Appetite improving.

25th.—There being a tendency to retraction of the muscular tissues from the extremities of the radius and ulna, and fearing they would be exposed, strapping over the end of the stump was resorted to.

26th.—Thirteen days after the injury, one of the five ligatures came away.

28th.—Much pain in the stump and arm. McMunn's elixir opii in twenty-drop doses, and repeat p. r. n.

30th.—Pain continues. Appetite poor. Essence of beef continued, with other nourishment, and ale occasionally. Continue elixir opii. In this case, some of the usual effects of opium and morphine are not perceptible; constipation does not exist, and however much morphine is taken in the twenty-four hours, no contraction of the pupil is apparent.

31st.—He is very weak, and can hardly be prevailed upon to leave his bed, to sit up even for a short time.

Feb. 13th.—Has suffered much pain in stump and arm since last date, and the various preparations of opium have been tried in succession, and after a few days the effect of each appeared to be lost, unless given to an unreasonable extent. To-day, the subcutaneous injection of morphine was resorted to—one fourth of a grain under the skin of the thigh of the right extremity.

14th.—The injection proved a failure, for the pain in the stump was not lessened, and considerable pain was felt in the lower extremity, with soreness of the flesh. He was also lame and unable to walk across the floor, as he had done for several days before. Whiskey and morphine to quiet pain, with as generous a diet as he could be prevailed upon to take.

16th.—The second ligature came away; the others remaining quite firm. No force that he could bear would bring them away. The granulations of the stump appear healthy, but the process of healing goes on very slowly. About this time, a small point of the ulna showed itself, and strapping was again resorted to, with the view to cover the ulna. Severe pain of an intermittent and neuralgic character continues. ℞. Ext. hyoscyami, gr. iss.; pulv. camphoræ, gr. ss. M. Ft. pil. S. p. r. n.

17th.—More comfortable the past twenty-four hours.

18th.—The third ligature came away. Pain continues. Appetite poor. Granulating surface does not diminish in extent. Straps over the end of stump omitted. Ulna not seen, and well covered by granulations.

20th.—Excessive pain since last date. Opiates relieved only partially, and sleeplessness and nervousness marked. Under the granulating surface and around the edges of the stump there could be felt deposited a firm and nearly inelastic substance, supposed to be cicatricial tissue, with perhaps a nerve imbedded therein; and it was decided to open a portion of the stump, at the seat of greatest pain, and make an examination, with the view of relieving it if possible. Accordingly, I invited Dr. Weld to attend and open the wound, and we removed a portion (as large as the end of the index finger) of dense cicatricial substance, imbedded in which was a nerve, and near it one of the ligatures; another, about the same size, was also removed from the central portion of the stump. The fifth and last ligature was also removed at the same time, having been firmly held by a substance of the same nature. During the operation, although the patient seemed fully under the influence of the anæsthetic, a nervous twitching of the stump was observed, at times so severe as to interfere with the use of the instruments.

21st.—Severe pain, and resort to opiates.

23d.—A bad night and morning. The operation has not apparently had the least effect in relieving the pain.

24th.—More comfortable; had a tolerably good night by occasionally taking a dose of whiskey. Opiates do not do much good.

25th.—Pain more intense than ever before. Sprinkled morphine on the granulating surface.

26th.—Pain continues, though not with as much severity. There still being considerable deposit in the end of the stump, with swelling below the elbow, extract of belladonna reduced with lard was applied, with the hope of causing the absorption of this deposit, and thus perhaps moderating the pain. Sulphate of quinine was also given in pretty large doses.

27th,—Continue.

28th.—Does not bear quinine well; causes nausea and loss of appetite. Under the use of the ointment, the size of the stump has diminished, and much of the deposit seems absorbed; the stump has a more natural feel than before; the granulating surface is now about one third its original size, where it has remained for the last ten days without any perceptible diminution in extent.

March 3d.—Great pain. Have applied, since last date, fomentations of hops, belladonna ointment, alcohol, aconite, &c., but with no permanent relief.

6th.—Continued severe pain. Have urged another trial of the subcutaneous injection, but the patient, remembering his first experience, will not consent. He is losing flesh rapidly, and his appetite is very poor. No medication now, except occasionally a little whiskey, which is the only thing which gives him any sleep. The stump looks well, although the healing process goes on very slowly.

9th.—Pain continues, almost without intermission, and with no apparent cause. The patient consented to try the subcutaneous injection once more, and one fourth of a grain of morphine was injected in the region of the supra spinous fossa of the same side with the amputated limb; relief in five minntes, and in half an hour, he said, he fell asleep and slept most of the time until 9, A.M., the next day.

11th.—The improvement within the past twenty-four hours has been most gratifying. His appetite has improved, and the appearance of the wound has changed decidedly for the better.

28th.—Continues to improve. Has gained strength rapidly. Rode out to-day. Injections every second night, or he could not sleep on account of pain.

13th.—Injections of morphine continued. He tried to get along without it last night, being the second night, but suffered so much pain as to lose all sleep. Appetite continues excellent, and general health and strength are improving.

April 29th.—Three and a half months since the accident. Wound completely healed to-day. Pain, on handling the stump, slight. He cannot get along, however, without the injections every second night, after which he goes to bed and sleeps soundly all night; on the intermediate night he gets very fair rest. Is out every day, and walks and rides as much as he likes.

The stump, considering the early sloughing of the flap, is of fair shape and proportions; though the radius and ulna are rather more prominent than is desirable, yet they are well covered with good sound integument.

This case is remarkable for the length of time required to heal the stump and for the excessive pain attending it from the first. Until the second trial of the subcutaneous injection, nearly every remedy known for the relief of pain had been carefully and persistently tried with but poor results, and it seemed probable that the patient might become insane unless relief could be found; but from the second trial of the injection every symptom improved, and if it had been used every night he would have been free from pain all the time. It was thought best, however, to use it only every second night.

This patient had every attention in nursing that a kind and devoted mother could give; a large and well-ventilated apartment, kept at an even temperature, and every comfort and luxury that the attending physician would allow; consequently nothing can be charged to lack of attention, or want of proper nourishment.

To a better understanding of the case, it should be mentioned that, five years since, in walking through one of the streets of Boston early in the evening, he fell into the cellar, left unguarded on the edge of the sidewalk, of a house in process of erection, and received considerable injury to the region of the spine and to the nervous system, by which he was confined to his room a few weeks. His mother thinks he never fully recovered from the shock of the fall, though he considered himself in good health and condition at the time of his recent accident.

How much the result of the former accident had to do with the present nervous symptoms I will not attempt to say, although it would seem that it might be safely inferred that the nervous system was somewhat weakened by the fall five years ago.

DR. WEBBER'S ESSAY ON CEREBRO-SPINAL MENINGITIS.

[Continued from page 36.]

Post-mortem Appearances.

The emaciation is not great; rigor mortis is usually very strong, though sometimes wanting. The petechiæ and other eruptive discolorations seen during life are usually present after death; sometimes they become developed then, though not previously visible; in a few cases the spots disappear during the last hours of life or immediately after. On incising them, they are seen to consist of an infiltration of blood into the cutaneous and cellular tissues, and they vary in color according to the amount of blood effused.

The principal lesions are found in the brain and spinal cord. The morbid changes vary from slight increase of the number of hæmorrhagic points to extensive softening of the brain, with effusion of lymph and pus between the membranes. On removing the calvarium, a congested appearance of the dura mater is seen, and there may be a flow of fluid of a serous or sero-purulent character, probably from beneath the dura mater, though not stated in the account. Sometimes ecchymosis is found under the pericranium. The arachnoid, in some instances, has lost its transparency and become opaque, especially at the vertex. Beneath it may be seen the vessels of the pia mater engorged with blood, that membrane being congested. Between the membranes there is often an effusion of lymph, pus or serous fluid, which may also extend into the ventricles, distending them; lymph occurs more frequently than serum, and is deposited upon the under surface of the cerebrum, cerebellum, pons Varolii and medulla oblongata rather than upon their upper surface, and follows the sulci, nerves and vessels, imbedding them in its substance. Pus is often found in the same situations. The lymph is of a greenish or greenish yellow color, varying in amount from a thin layer to nearly half an inch in thickness, and in consistency from a dense, almost fibrous membrane to a soft, semi-liquid substance. The veins and sinuses of the brain are distended with dark fluid blood. The substance of the brain may be natural in appearance, but it is often congested, the hæmorrhagic points being increased in numbers; it may be softened almost to a pus-like liquid, though such an extensive softening may be partially cadaveric. On cutting into the brain, a serous liquid sometimes exudes in great abundance. The same congested appearance and softening are found in the cerebellum, pons Varolii and medulla oblongata. The choroid plexus has been found thickened, injected and covered with lymph. The most frequent lesions are, effusion of serum, lymph or pus, and a congested condition of the membranes or substance of the brain.

In the spine, a similar condition may exist, the membranes being congested; there being an effusion of serum, lymph or pus, and the substance of the cord being congested or softened. It is to be regretted that the spine has not been more frequently examined in *post mortems* performed on persons who have died of this disease. So few are the cases recorded, that it would not be safe to enter upon any numerical statement of the comparative frequency with which lesions occur in this part of the nervous system. In twenty-nine instances the brain was examined; in only thirteen was the cord exposed, and in one of these to the extent of only three inches.

In the lungs, the only lesion which is at all general, is a congested state. This congestion is usually in the dependent portion, and is undoubtedly hypostatic, sometimes probably cadaveric. Occasionally, there are hæmorrhagic spots in the substance of the lung, such as have been called apoplectic.

In the pneumonic form, or when pneumonia co-exists with the affection of the brain, there are found the lesions of the lungs usual in that complaint.

When there is sore throat during the course of the disease, marks of inflammation may be found after death.

The heart is occasionally found surrounded by serum or other liquid, contained in the pericardium. Sometimes there is a thick deposit of lymph upon the surface of the pericardium, and sometimes the same substance is found in one of the cavities. The coagula in the heart are often soft.

Upon opening the abdomen a petechial condition of the mesentery or the intestines may be observed occasionally, spots appearing upon the peritoneum similar to those seen in many cases upon the skin.

Among the viscera the liver and spleen are most frequently affected. They are enlarged, congested, or have undergone both these changes. At times they are as large as twice their natural size.

The stomach when not healthy is found to be congested or even softened; this latter change may, however, be cadaveric.

Peyer's patches are sometimes slightly ulcerated, more frequently unduly prominent. The solitary glands are occasionally enlarged.

The kidneys are not unfrequently congested, though no mention has been found of any abnormal appearances under the microscope.

The blood is frequently unnaturally fluid and dark colored; so general was this that it was occasionally considered characteristic of the disease.

Worms are sometimes found in the intestines and stomach, usually the lumbrici, though they probably had no influence on the disease; the fact being interesting because a complication with worms has existed in some parts of France and was there considered one of the most prominent symptoms.

In some instances, especially where death has followed close upon the attack, no lesion has been found in any part of the body sufficient to produce the fatal result. It must be supposed that then the shock has been sufficient to overpower the vital forces, or the change in the blood has been so great as to extinguish life immediately.

DURATION AND MORTALITY.

What data have we for answering the question so often asked, "Doctor, how long shall I be sick?" Tables I. and II., drawn up from the records of 164 cases found in various medical journals, may help to an answer.

If a patient lives beyond the sixth day there is some chance of recovery, less than one-sixth having died after that time; the most fatal period is from the second to the fifth day, more than half dying then. In regard to recovery it is not possible to give so precise information. As will be seen by table II., health may be regained at any period from the third day to the tenth week. Many of the cases mentioned were not reported up to the restoration of full health. Convalescence is usually slow and tedious, and as soon as that was fairly established the record ends. This may perhaps account for the great difference in the length of the cases, some being recorded till health was entirely reëstablished and others only until convalescence.

The state of chronic ill health, or tedious convalescence, to which allusion has been made, and which is frequently found after an attack of cerebro-spinal meningitis, is the only sequela at all common, and postpones the return to health. Continued weakness of some of the limbs and general debility are the most usual symptoms of this condition. Occasionally abscesses occur, but not very often, and the impairment of the senses, which was noticed during the acute stage, may remain for many weeks.

This disease attacks by preference youths and those in good health. The very young, the aged and the feeble are less liable to it. Table III. gives a comparative view of the ages of those who were attacked. It will be seen that from 15 to 21 is the most exposed age, one-third of the cases having occurred during that period, and only five were attacked who were over forty.

Males were more frequently attacked than females, the former furnishing 114 cases, the latter only 36; sex not mentioned, 14. 67 cases, however, were soldiers or midshipmen in the academy at Newport; deducting these, we have only 47 males, and the disproportion is not so marked, though still noticeable.

The mortality was very great. Out of a total of 249 cases, death occurred in 147, and only 102 recovered. Of the 47 males not in the military service, 27 died; of the females, 18; showing a slightly larger proportion in the number of deaths among males.

TREATMENT.

A very important consideration, and one which will especially interest the patient and his friends, relates to the means of cure. Can anything be done to arrest the progress of the disease and restore health to the sufferer, or is it true that "physicians seem not to understand it"? The preponderance of deaths over recoveries would seem to show either that the disease has not been understood, or rather that the remedies have not been; or that it is an unusually obstinate complaint.

The natural tendency seems to be towards death. Treatment to be effectual must be early; in nearly every case where delayed long, death was the result.

It is generally agreed that all debilitating measures should be avoided; general bleeding is rather injurious than otherwise, though in the first and fifth cases recorded by Dr. Robert Burns, of Philadelphia, in the *American Journal of Medical Sciences* for April, 1865, bleeding seemed to be beneficial. In two other cases where this remedy was employed, death occurred. Local bleeding, especially by means of leeches to the back of the neck, or to the temples, and wherever inflammatory action has appeared, is beneficial. Emetics are useful only at the commencement when the stomach is oppressed with ingesta. Violent cathartics are contra-indicated. A supporting and stimulating treatment is demanded. Counterirritation by means of friction with stimulating liniments, sinapisms, dry cupping and blisters; heat applied externally to the body and lower extremities; cold to the head by means of ice-bags or cloths wrung out in cold water; stimulating enemata; gentle cathartics; quinine; opium to quiet restlessness and procure sleep; stimulants, and nourishment in the shape of milk punch, beef tea, strong broths, &c., have been generally adopted as the best means at our command to control this disease. Quinine and stimulants must be given freely and largely; opium is considered one of the most valuable remedies by many, and apparently with good reason, but it must be given in large doses frequently repeated. It was used thus in France by M. Chauffard with success, as mentioned below. It must, however, be acknowledged that a large proportion die under this treatment.

In addition to these remedies Dr. Upham employed small and frequently repeated doses of calomel, or calomel and ipecac; they were also employed by others. Many cases did well, and about the same number died.

The cases recorded by Dr. Robert Burns, of Philadelphia, include the largest proportion of recoveries, 9 in 12, and it may be interesting to attend to what he says in regard to treatment.

"The treatment pursued was the early abstraction of blood generally or locally, according to circumstances, to relieve the brain and spine. Stimulating frictions to the whole spinal column and extremities. Warmth to the feet, with sinapisms to different parts to cause counterirritation. Blisters sometimes, but seldom necessary. Stimulants. Diaphoretics when feverish. The liver and bowels steadily acted on by mercurial purgatives at night and castor oil next morning, and as soon as the violence of the symptoms abated, quinia freely administered to the amount of eight or ten grains per day for the first three or four days; this, however, to be varied according to circumstances. The nourishment chiefly beef tea or essence, barley gruel, sago and such other articles of a similar kind as best suited the desire or inclination of the patient." It will be seen that his treatment differed from others in a more general use of leeches.

Dr. McVey, of Morgan County, Ill., gave opium in large doses, Fowler's solution, and at length strychnia to counteract paralysis and nervous weakness. He had six recoveries and three deaths. His partner, Dr. Brown, had sixteen recoveries and five deaths.* Fowler's solution was used with some success by Dr. Miner, in 1825, and by other practitioners during previous epidemics. Strychnia was used, though earlier in the attack, in many cases which occurred at Newport, recorded by Surgeon Wales, U. S. N., in the *American Journal of Medical Sciences,* April, 1863; but it does not appear to have contributed much to a favorable result. The 3d, 4th and 5th cases died under strychnia, while case 6 recovered without it.

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* Transactions of Illinois State Medical Society, 1864.

Aconite was used in three cases which resulted in recovery.

There are three remedies which have been proposed, and which deserve notice: bisulphite of soda, permanganate of potassa, and ergot.

Bisulphite of soda was employed by Dr. Le Baron Munroe at the hospital on Galloupe's Island, Boston Harbor, in two cases, both of which recovered.* The same remedy was employed by Dr. Pearce, of Mechanicsburg, Ohio, with favorable results.† It has been used with success in pyæmia and other diseases in which the character of the blood seems to be changed, and if the disease we are considering is, as many think, caused by a vitiated state of that fluid, why may not the bisulphite be used with advantage? It is a remedy worthy of further trial.

Permanganate of potassa was used by Dr. Isaac Kay, of Ohio.‡ He says that of the first twenty cases of the disease in Springfield, O., only one recovered. Then the permanganate was employed, "one grain dissolved in one ounce of water and a tablespoonful given every hour." The patient to whom it was first given had been attacked thirty-six hours previously, and was delirious, breathing with difficulty and vomiting. "The vomiting ceased almost immediately, and the brain, in less than one hour, was considerably relieved of congestion, and the patient, after lying for three days in a partially delirious state, began very rapidly to recover, and in five days could walk about the city. Permanganate of potash, in the dose above mentioned, every hour, with occasional doses of opium to quiet the delirium, and an application of cold, wet clothes to the occiput and over the cervical vertebræ, constituted the only treatment." He says, "Since the adoption of this treatment three-fourths of the cases have recovered."

Ergot has been employed in five instances. In one case it was not given until the twenty-sixth day of the attack, and did not benefit the patient. In the other cases it was given early and they all recovered; but it is perhaps worthy of remark that three of these are among the most protracted cases recorded, two having had a relapse. To decide the relative value of ergot and permanganate of potassa farther experience is necessary.

In the chronic state of ill-health into which many fall who have recovered from the acute form of the disease, the most beneficial course of treatment is the administration of tonics, iron and quinine, and good diet, with attention to hygienic conditions. A change of situation and removal to another part of the country or travelling might afford benefit; in short, the methods usually employed for the restoration of a shattered and debilitated constitution.

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* Boston Medical and Surgical Journal, vol. 73.
† Cincinnati Lancet and Observer, May, 1865.
‡ Boston Medical and Surgical Journal, vol. 70.

The varied success of treatment in different places is, without doubt, due to variety in the severity of the epidemic, which in some places is very mild and in others rages with a mortality as great as that of the most fatal diseases.

TABLE I.—*Duration of Fatal Cases.*

Duration.	No. of Cases.	Duration.	No. of Cases.	Duration.	No. of Cases.
Less than 1 day.	9	8 days.	4	30 days.	1
1 day.	6	10 "	2	34 "	1
2 "	18	11 "	1	36 "	1
3 "	17	14 "	1	5–6 weeks.	1
4 "	16	18 "	1	Several days.	1
5 "	10	20 "	1	Not mentioned.	12
6 "	4	22 "	2		
7 "	1	24 "	1		

TABLE II.—*Duration of Recoveries.*

Duration.	No. of Cases	Duration.	No of Cases.	Duration.	No. of Cases.
3 days.	1	21 days.	3	58 days.	1
4 "	2	23 "	2	Few days.	1
5 "	2	26 "	1	6 weeks.	2
7 "	3	28 "	2	18 "	1
10 "	1	30 "	1	10 "	2
13 "	1	36 "	1	4 months.	2
14 "	3	37 "	1	5 "	1
16 "	1	40 "	1		
17 "	1	48 "	1	Not mentioned.	13
20 "	1	50 "	1		

TABLE III.—*Age and Position.*

Age.	Military.	Civilian.	Total.	Age.	Military.	Civilian.	Total.
1		2	2	21	5		5
1½		1	1	22	3		3
2		2	2	23	2		2
3		2	2	25	2		2
4½		1	1	26		2	2
5½		1	1	27	1		1
6		4	4	28	2		2
7		3	3	29	1		1
8		2	2	30	1	2	3
9		2	2	31	1	1	2
10		4	4	32	1		1
11		4	4	34		1	1
12		1	1	37		1	1
14	1	2	3	38	1		1
15	4	3	7	40	2		2
16	3	3	6	42		1	1
17	4	1	5	46	1	2	3
18	8	2	10	68		1	1
19	11	6	17	Not stated	11	37	48
20	3	2	5		68	96	164

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY CHARLES D. HOMANS, M.D., SECRETARY.

MAY 28th.—*Cerebro-spinal Meningitis.*—Dr. MORLAND reported the case, the following account of which is prepared from the record furnished by Dr. J. F. A. Adams, resident graduate in the Medical Department of the City Hospital.

G. W. T., twenty-eight years old, was admitted into the Boston City Hospital, May 24th, 1866, at 3 o'clock, P.M. He was at once seen and prescribed for by Dr. Adams. Very little of his previous history could be obtained. A friend, who came with him, stated that he was unmarried, and that, since he had known him—about two years—he had not been very strong, but that he was a quiet, temperate man. He was a dealer in photographs, and a resident of Boston. His father and a brother, it was stated, died of phthisis.

He was taken ill on May 20th, and is said to have been in a state of stupor during the first few days. Dr. George Derby, Admitting Physician to the Hospital, on first seeing him, supposed him to be intoxicated, but immediately discovering him to be very ill, sent him at once to the Hospital. On admission, he was almost completely unconscious, groaning and crying, as if in great pain, which, so far as could be ascertained, was in the head, and especially on the left side, and over the upper part of the forehead, upon which he constantly kept his hand. When aroused and asked if he felt pain elsewhere, he replied that he "did not know of any." The pupils were contracted, the pulse 68, very full, hard and irregular. He was exceedingly restless. A slight sero-purulent, dark-colored discharge from the right ear was noticed. A sinapism was applied to the back of the neck, and a scruple of the bromide of potassium was administered. At 7 o'clock, P.M., large sinapisms were applied to the calves of the legs, and the dose of bromide was repeated, and continued, every two hours, through the night. During the evening, six leeches were applied behind each ear, and the bleeding was very free after their removal. The urine was drawn off by the catheter, and was of a very dark, coffee color. The pulse rose to one hundred after the leeching, and became softer and more regular, but was still very variable. The pupils were then observed to be dilated, and they remained so. A few dark-colored, minute spots, not fading on pressure, were observed upon the chest.

The patient was seen by Dr. Morland about 10 o'clock next morning, May 25th. The pulse was then 120, and exceedingly small and weak; there was some sordes upon the teeth; the spots upon the chest were the same. The bowels had not moved since admission. A warm salt-and-water enema was directed; also an ice-bag to the head, and wine and water, freely. The patient was exhausted, and very restless during the entire day, crying and moaning, as if in pain, and quite unconscious. The enema produced a free evacuation of dark-colored fæcal matters. The urine passed involuntarily. Gruel was swallowed without much difficulty. In the afternoon, the pulse was weaker and exceedingly irregular--varying from 80 to 160, within a few minutes, and almost without rhythm. A vapor-bath was used, in bed, and a tolerably free diaphoresis obtained. The patient became more quiet after the bath, and the pulse was 152, full, soft and regular. The relief, however, was only temporary, and he continued in his previous condition, with the exception of increasing weakness, until 4 o'clock the next morning, when he died, about 37 hours after admission.

The nurse stated that she had observed convulsions, of short duration, but it could not be positively determined whether these were anything more than the violent jactitations, which were constantly present. There was certainly no opisthotonos.

On examination of the urine, *albumen* was found to be abundant, and the microscope revealed *granular casts* and *pus-cells*. *Urea* could not be detected.

In reference to the *diagnosis*, it was not easy to make a decision. Typhoid fever was suggested by the stupor, the sordes and the general condition. The spots upon the chest were not "rose-spots," nor were they of a purpuric nature. The somewhat dubious report as to the occurrence of convulsions, in connection with the results of the examination of the urine, suggested uræmia. It is fair to add, that, although cerebro-spinal meningitis was mentioned, in this connection, no positive diagnosis was made. The account of the *post-mortem* examination, which was made by Dr. C. W. Swan, Pathologist to the Hospital, is appended. The specimen was shown to the Society by Dr. Swan.

Autopsy.—May 27th, 9, A.M.—Membranes of the brain rather dry. A sub-arachnoid deposit of opaque, yellowish fibrin over the upper and anterior parts of each hemisphere, particularly towards the median line—at the base of the brain, extending into the various fissures, and upon the superior and cuneiform process of the cerebellum.

The whole length of the spinal cord was enveloped in a similar deposit, which was, however, less in amount towards the upper extremity than elsewhere. *Lungs* pale, healthy. *Liver* and *kidneys* rather dark. The *stomach* was distended with gases, and contained bright, olive-green fluid in large quantity. The *heart* was firm. Fibrinous coagula in both sides. Right auricle and vena cava distended by soft black coagula. About half an ounce of serum in the pericardium.

Dr. H. K. OLIVER said he saw this patient previous to his application for admission to the City Hospital, The first day of his illness great complaint was made of pain in one of the ears, the membrana tympani of which was much congested; the next day there was a great discharge of pus with a little blood from the same ear; there were then no symptoms of meningitis.

Dr. JACKSON suggested that in this case the inflammation might have extended from the ear to the membranes of the brain. He said this might take place though the bone intervening was perfectly healthy, and instanced several cases of the kind which had come under his observation.

Dr. OLIVER said the same idea had occurred to him.

Honoring a Physician's Memory.—The Nova Scotia Legislature has voted $2,000 to the widow of Dr. Slayter, who died by cholera while employed in attending on the passengers of the ship England, which put into Halifax in distress last winter with cholera on board.—*Nashville Journal of Medicine and Surgery.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, AUGUST 16, 1866.

CENSUS OF 1860.

The last and fourth volume of this important national publication, containing the statistics of mortality and population of our country, has appeared. Five years of labor and two millions of dollars have been spent in its preparation, in collecting, arranging and utilizing this vast amount of material. In no other country is there such opportunity of studying the effects of diversity of climate, soil, occupation, and mode of life as our immense territory affords, bounded by the two oceans, and a sub-arctic and tropical line, embracing mighty rivers and fresh water seas, and containing a population composed of all the nations of the earth. Here, if anywhere, can many of those questions connected with the admixture of races and the exodus of nations, of so great interest to the anthropologist, be solved, and the essential truths in the study of the natural history of disease be recognized, for although our census is probably no freer from error than those of other lands, and is in many respects imperfect and incorrect, it is still uniform in its faults, and one method has been pursued in collecting data over the three millions of square miles it represents.

It is gratifying to learn at the start and before we turn to the hundreds of pages of figures and details of mortality, which have been so carefully compiled and digested by Dr. Edward Jarvis, of Dorchester, Mass., to whom the profession of this country owes so much for this and similar important but thankless labors connected with the statistics of disease and social science, that the ratio of death to life has diminished since the last census. In 1850, with a population of twenty-three millions, 323,023 persons died, or 28 deaths in two thousand; while in 1860, in a population of thirty-one and a half millions, the number of deaths was 394,153, or 28 deaths in every two thousand. The mortality being established at 22 per cent., and the increase at 35½ per cent., we arrive at the startling conclusion that the population of our country at this ratio in 1900 will amount to *one hundred and seven millions*.

The nomenclature and classification employed in this census is the same as in the preceding, viz.: that prepared by a committee of the American Medical Association in 1846, on the basis of the English reports, which reduces the great number of popular names of disease returned to the marshals to one hundred and twenty-four terms and thirteen divisions. The territory has been divided according to geographical position and climatic character into nine districts, as follows:—

I. Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut and New York.
II. Michigan, Wisconsin, Minnesota, and Nebraska.
III. New Jersey and Pennsylvania.
IV. Ohio, Illinois, Indiana, Iowa, and Kansas.

V. Delaware, Maryland, District of Columbia, Virginia, and North Carolina.
VI. Kentucky, Tennessee, and Missouri.
VII. South Carolina, Georgia, Florida, and Alabama.
VIII. Mississippi, Louisiana, Arkansas, and Texas.
IX. California, Oregon, Washington, New Mexico, Utah, Dakota, and Nevada.

The tables showing the proportion of white and colored population according to districts, the growth of the population in each district according to age and sex, the effect of distribution on the rate of mortality, on the dependent and sustaining classes, the composition of the population with the number and nativity of all foreigners in each State and principal city, and diffusion and migration of the native population, are all of great interest, but we have no space for their consideration.

As above stated, the number of deaths in 1860 was 394,153, of which 207,943 were males, and 186,219 females, and the cause of death is thus recorded in table II. of Dr. Jarvis's mortality statistics, on the following page.

Other tables, illustrating the causes of death in each State, the number and causes of deaths according to sexes and ages in each State, and according to months, are given. The fact that they occupy more than 200 quarto pages will show the minuteness of detail and care which have been observed in their preparation. The accompanying table furnishes the number of deaths from each class of diseases and their ratio to the population in 1850 and 1860.

DISEASES.	1850.		1860.	
	Deaths.	In 10,000 of all known causes.	Deaths.	In 10,000 of all known causes.
I. Zymotic diseases,	131,813	4,735	120,585	3,388
Sporadic diseases:				
II. Diseases of uncertain or variable seat,	21,044	758	32,354	909
III. Dis. of the brain and nerv. system,	23,787	854	40,393	1,134
IV. Dis. of the respiratory organs,	54,800	1,968	88,030	2,473
V. Dis. of the organs of circulation,	2,535	91	6,530	183
VI. Diseases of the digestive organs,	15,172	541	21,051	591
VII. Diseases of the urinary organs,	1,101	39	2,112	59
VIII. Dis. of genera. organs & childbirth,	3,842	135	5,682	159
IX. Diseases of the locomotive organs,	1,770	63	3,274	91
X. Diseases of the skin,	516	18	2,271	63
XI. Old age,	9,027	324	10,887	305
XII. External causes,	13,006	467	2,145	60
XIII. Stillborn,	377	13	1,540	43
XIV. Unknown,	44,233	1,588	36.707	1,031
XV. Violent deaths,				

Tables follow giving the number and proportion of deaths from each cause to total deaths from all known causes, so that the fatality and prevalence of every disease may be compared in various sections of the country, and showing the relative ratios of other countries in comparison with our own in a similar manner.

"All the Atlantic and Pacific States suffered less than the average, and all the Mississippi States suffered more than the average, from the zymotic class of maladies. Ohio, Indiana, Illinois, Iowa, and Kansas had the highest ratio—4,090 in 10,000, which is 75 per cent. higher than that of New England and New York, which was 2,723 in 10,000—the lowest.

DISEASE.	DEATHS.		
	Males.	Females	Totals.
Abscess,	349	219	568
Anæmia,	21	18	39
Aneurism,	33	11	44
Angina pectoris,	4	2	6
Apoplexy,	1,779	1,304	3,083
Asthma,	358	311	669
Bowels, disease of,	901	709	1,610
Brain, disease of,	3,344	2,382	5,726
Bronchitis,	1,052	867	1,919
Cancer,	1,230	2,062	3,292
Carbuncle,	63	35	98
Cephalitis,	5,772	4,577	10,349
Childbirth,		4,066	4,066
Cholera,	599	397	996
Cholera infant.,	2,582	2,326	4,808
Chorea,	21	34	55
Cold water,	5		5
Consumption,	23,036	26,046	40,082
Convulsions,	5,018	4,059	9,077
Croup,	8,250	6,961	15,211
Cyanosis,	9	20	29
Cystitis,	151	31	182
Debility,	1,077	1,064	2,141
Delirium tremens,	518	57	575
Diabetes,	289	96	385
Diarrhœa,	4,339	3,511	7,850
Diphtheria,	788	875	1,663
Dropsy,	6,161	6,496	12,657
Dysentery,	5,630	4,838	10,468
Dyspepsia,	513	319	832
Enteritis,	3,556	2,748	6,304
Epilepsy,	284	217	501
Erysipelas,	1,451	1,295	2,746
Fever, intermit.,	2,390	2,160	4,550
Fever, remittent,	5,768	5,352	11,120
Fever, typhoid,	10,339	8,897	19,236
Fistula,	30	7	37
Gastritis,	479	540	1,019
Gout,	33	8	41
Heart, disease of	3,452	2,954	6,406
Heat,	299	61	360
Hæmorrhage,	743	578	1,321
Hepatitis,	119	81	200
Hernia,	260	100	360
Hydrocephalus,	1,880	1,534	3,414
Hydrophobia,	26	12	38
Ileus,	31	13	44
Infantile,	3,374	2,860	6,234
Inflammation,	730	596	1,326
Influenza,	192	193	385
Insanity,	251	201	452
Intemperance,	842	89	931
Ischuria,	47	8	55
Jaundice,	365	316	681
Joints, disease of,	82	49	131
Kidney, dis. of,	644	172	816
Laryngitis,	48	26	74
Liver, disease of,	1,466	1,167	2,633
Lungs, disease of,	1,999	1,577	3,576
Malformation,	73	54	127
Marasmus,	470	439	909
Measles,	1,937	1,962	3,899
Mortification,	184	96	280
Necrosis,	124	60	184
Neuralgia,	411	492	903
Old age,	4,899	5,988	10,887
Ovarian dropsy,		9	9
Paralysis,	2,318	2,319	4,637
Paramenia,		157	157
Parotitis,	76	47	123
Pericarditis,	27	22	49
Peritonitis,	49	64	113
Phlebitis,	11	14	25
Pleurisy,	728	532	1,260
Pneumonia,	15,816	11,278	27,094
Prostate, dis. of,	4		4
Puerperal fever,		1,202	1,202
Purpura & scurvy,	52	27	79
Quinsy,	369	361	730
Rheumatism,	1,106	775	1,881
Scarlatina,	13,221	13,181	26,402
Scrofula,	1,401	1,302	2,703
Skin, disease of,	983	773	1,756
Smallpox,	736	535	1,271
Spine, disease of,	616	462	1,078
Splenitis,	47	29	76
Stillborn,	891	649	1,540
Stomach, dis. of,	137	137	274
Stone,	607	67	674
Sudden death,	469	347	816
Syphilis,	139	94	233
Teething,	2,563	2,346	4,909
Tetanus,	995	626	1,621
Throat, dis. of,	1,710	1,916	3,626
Thrush,	511	501	1,012
Tumor,	256	352	608
Ulcer,	199	181	380
Unknown,	19,181	17,526	36,707
Uterus, dis. of,		244	244
Whooping cough,	3,832	4,576	8,408
Worms,	1,041	955	1,996
Yellow fever,	504	156	660
Aggregates,	193,765	180,257	374,022
VIOLENT DEATHS.			
I. Accidental.			
Acc. not specified,	3,513	665	4,178
Burns and scalds,	1,797	2,469	4,266
Drowning,	2,664	457	3,121
Fall,	1,019	304	1,323
Fire-arms,	694	47	741
Freezing,	126	13	139
Lightning,	133	58	191
Neglect & expos.,	102	60	162
Poison,	557	393	950
Railroad,	542	57	599
Strangulation,	189	102	291
Suffocation,	1,091	1,038	2,129
Total accidents,	12,427	5,663	18,090
II. Suicide:			
Cutting throat,	71	11	82
Drowning,	40	31	71
Fire-arms,	109	3	112
Hanging,	250	56	306
Poison,	93	44	137
Strangulation,	2		2
Not specified,	224	59	283
Total suicides,	789	204	993
III. Homicide,	428	33	461
IV. Murder,	479	49	528
V. Executed,	55	4	59
Tot. vio. deaths,	14,178	5,953	20,131
Grand totals,	207,943	186,210	394,153

"The class of zymotic diseases was relatively more fatal in Ireland, where 39 per cent. fell under it. In England, Scotland and France the relative mortality was about two-thirds, and in Frankfort and Brussels about one-third, as great as that in the United States."

"The proportion of deaths from insanity was twice as great in New England and New York as in Michigan, Wisconsin, Minnesota, and Nebraska. The same difference existed between Districts III. and IV.; and the same, and even somewhat greater, between Districts I. and VII. and VIII. The large proportion of insanity in California is produced by the excitement and oppressive anxieties, and the great and sudden changes of fortune among many of the people. The ratio was about the same in Great Britain and Ireland, and three and one-half times as great in France as in the United States."

"In 1850, 23,787, or 758 in 10,000 of all who died, fell under the *diseases or disturbances of the brain and nervous system*. In 1860 the number and ratio were greatly increased; 22,591 males, and 17,802 females, 40,393 in all, died of this class of diseases, in the proportion of 1,202 males, 1,065 females, and 1,134 of both sexes among 10,000 of each."

"Consumption was more fatal at the north than at the south, and more at the east than at the west, except at the extreme south. Among 10,000 deaths from all causes in each district 2,162 died in New England and New York, 1,793 in New Jersey and Pennsylvania, 1,535 in Michigan, Wisconsin, Minnesota, and Nebraska, 1,298 in the States between the Ohio river and the lakes in Iowa and Kansas, 1,215 in the Pacific region, 1,195 in Delaware, Maryland, District of Columbia, Virginia, and North Carolina, 1,048 in Kentucky, Tennessee, and Missouri, 568 in Mississippi, Arkansas, Louisiana, and Texas, 492 in South Carolina, Georgia, Alabama, and Florida. There is a wide difference in its fatality between the cold and the warm climates, being more than four in the extreme north to one in the extreme south in the Atlantic States, and nearly three to one between the diverse parts of the Mississippi valley."

"Diabetes caused the death of 231 persons in 1850; and of 289 males and 96 females—385 of both sexes—in 1860. This disease prevailed in much the largest proportion at the north. In the extreme northern and southern districts it was more in the east than in the west, but in the middle latitudes it was more in the west than in the east. The ratios were ·19 per cent. in New England and New York, ·10 and ·11 per cent. in all the States north and west of the Ohio river, ·09 per cent. in the southeast and in the Pacific region, and ·03 per cent. in the southwest."

"It is to be noticed that the numbers frozen in the south exceeded those frozen in the north. There was a larger ratio of the deaths from this cause in the States south of the southern line of Pennsylvania and the Ohio river than in the States north of it, except the northwest. The largest number, 12, frozen in any State was in Michigan, the next, 11, in New York, and next, 10 each, in Mississippi and Texas. There were more persons frozen in either of the latter States than in all New England. Those in Wisconsin, Pennsylvania, and Georgia were the same, 7 in each; the same, 3 each, in Maine, New Jersey, and Illinois, and in Louisiana and Missouri. These must be referred not to the temperature of the atmosphere, but to the habits of the people, to difference of exposure, and means of protection. In Sweden we find only 8 in 10,000 deaths from this cause."

"Of the 2,129 who died from suffocation, 1,831 were under 1 year, 1,991 under 2, and 2,049 under 5. They were probably the children of the slaves. No distinction of color or condition is made in the analysis of 1860, but the mortality report of 1850 states that, of the 934 deaths from suffocation, 771 were colored and 163 were whites; 764 were slaves, 7 were free colored, and 163 white; and of these 730 were under 1 and 880 under 5 years of age. In 1860, 872 were Districts V. and VI., and 1,128 in Districts VII. and VIII.; 2,000 were in the slave States, and 129 were in the free States."

A highly interesting table, showing the order of the States in respect to the fatality of the leading diseases is given on page 254. Then follow tables illustrating the ratio of deaths at each age from each cause; the number of each disease to 10,000 of all diseases at each age; the ratio of deaths in each month to total deaths in the year from each cause, demonstrating the effect of seasons and months on the causes of death; the order of the months in respect to the fatality of consumption; the ratio of deaths in each age to total deaths in each district; the mortality in the periods of life; the mortality of immigrants; the relative mortality of whites and blacks.

This brief enumeration of the contents of this portion of the census conveys but a faint impression of its elaborate and instructive character. The importance of the data it is charged with can only be appreciated by personal examination and study.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, AUGUST 11th, 1866.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - -	50	51	101
Ave. mortality of corresponding weeks for ten years, 1855—1865	62.2	49.9	112.1
Average corrected to increased population - - - -	00	00	123.34
Death of persons above 90 - - - - - - -	0	0	0

CORRECTION.—In the third paragraph of our Editorial in last week's JOURNAL, for "Conference" read *Commission*.

NOTICE.—Part 53 of Braithwaite's Retrospect was mailed from this office on the 7th inst., and Part 6, Vol. VI. Medical Communications on the 14th inst., to the members of the Massachusetts Medical Society who have paid their assessment for the year 1866-67. Members who have paid and do not find the books at their postoffices, are requested to forward their vouchers to the Librarian, care of D. Clapp & Son, Medical and Surgical Journal Office, 334 Washington Street, Boston.

DEATHS IN BOSTON for the week ending Saturday noon, Aug. 11th, 101. Males, 50—Females, 51. Abscess, 2—accident, 3—inflammation of the bowels, 1—congestion of the brain, 2—disease of the brain, 2—inflammation of the brain, 1—cholera infantum, 30—cholera morbus, 3—consumption, 10—convulsions, 1—croup, 1—diarrhœa, 7—diphtheria, 1—dropsy, 2—dropsy of the brain, 2—dysentery, 5—typhoid fever, 2—homicide, 1—infantile disease, 4—disease of the jaw, 1—disease of the kidneys, 1—congestion of the lungs, 2—marasmus, 4—measles, 2—old age, 1—phlebitis, 1—premature birth, 1—puerperal disease, 1—ulcers, 1—unknown, 6.

Under 5 years of age, 65—between 5 and 20 years, 4—between 20 and 40 years, 17—between 40 and 60 years, 8—above 60 years, 7. Born in the United States, 76—Ireland, 17—other places, 8.